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ABSTRACT

This report reviews evidence concerned with age-related aspects of social perception processes and their effects on overt behavior. Focus is on the variability among children in comprehension and evaluation of action, motives, and consequences of modeled behavior. Findings indicated that comprehension of acts in terms of motives and correctness of evaluations both increase with age. Behavioral differences appear to be related to these kinds of age differences in comprehension and evaluation. In a study, third graders who watched an aggressive television show with separations (commercials) were more aggressive than third graders who watched without interruptions, but this difference did not hold for older age groups. Finally, possible effects of age-related changes in the bases for evaluating social acts in general (i.e., Piaget's moral development paradigm) are discussed. Preliminary data concerning these questions are presented. All of the research is discussed and interpreted in reference to Bandura's cognitive mediator concept. (DP)

SOCIAL INFERENCES AND SOCIAL BEHAVIOR: DEVELOPMENTAL ASPECTS OF THE RELATIONSHIP BETWEEN THOUGHT AND ACTION

Symposium on Social Understanding in Children and Adults: Perspectives on Social Cognition
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Our paper differs from the other papers you will be hearing today in two respects. First, it deals with situations in which the inferrer is not a participant in the social interaction, but rather is an observer of the interactions of other persons. Second, it concerns not just the processes involved in making inferences about others, but also the relationship between those inferring processes and the observer's own behavior. It is an effort to forge a link between ideas about social perception and ideas about the behavioral effects of observation, such as those predicted by observational-learning theorists. More particularly, we want to consider some age-related aspects of social perception processes and their effects on behavior.

Our interest in these problems stems from a concern with the processes involved in the behavioral effects of complex presentations, such as television programs. These stimuli typically show: (1) Social behaviors which may be observationally learned or have disinhibiting effects, along with (2) information that may modify these effects. For example, an actor's motives for behavior and the consequences of the behavior to himself and others have been shown to have modifying power in simple laboratory studies of observational learning (e.g., Bandura, 1965; Berkowitz & Geen, 1967; Berkowitz & Rawlings, 1963; Walters, Parke & Cane, 1965). Of course,

in the simple stimuli used in these studies, it is relatively easy for even very young observers to associate the relevant cues with the observed acts; they are typically contiguous with action and are relatively explicit. But, in complex interactions, such as are shown in television dramas or most real-life modeling instances, the modifying cues are often subtle, inexplicit and noncontiguous with the focal act. Consequently, comprehensions of action, motives and consequences are likely to be variable under these conditions. We are interested in those variabilities in comprehension and the ways in which they may affect subsequent behavior.

We have found that a useful conceptual device for explaining the variation in behavior that can follow observation of the same complex presentation might refer to Bandura's (1965) familiar cognitive-mediator concept. He suggested that complex behaviors themselves are probably coded verbally and imaginally to form such a mediator to guide later behavior. It's only a short step from that idea to the notion that such a mediator might also include contextual cues, like motives and consequences, which function to modify the effects of the coded behaviors. Since comprehension of the observed act in terms of these complex cues is likely to be quite variable, inferences and evaluations about the focal behavior -- and in turn the behavioral outcome of the observation itself -- are likely to vary as well. The mediator concept, then, allows us to explain different behavioral effects of the same complex presentation, because differences in post-observation behaviors are viewed as the result of differences in the content of the mediator and resulting evaluations of the action.

An important dimension of these differences is age. A number of studies in the past few years have shown age-related changes in the cognitive skills for recalling and understanding the content of presentations. Most of this work has been done with children's understanding of films and television programs. For example, in one study (Collins, 1970) we found that children as old as third graders remember only a small proportion of the information that adults consider essential to retelling the plot of a television program. But as they grow older, their ability improves both to know what is important in the plot and to focus on that important information while ignoring less central content. Age improvement has also been found in performance of such cognitive tasks as correctly reconstructing the sequence of events (Leifer et al., 1971) and specifying the causal relationships between scenes in a plot (Flapan, 1968). These results suggest that young children may very well evaluate social acts in complex presentations differently than older children because they comprehend them less completely and less adequately.

In some recent work of ours at Minnesota, Tom Berndt, Valerie Hess and I have pursued the question of how children's inferences about social acts change with age. We showed an edited version of an aggressive television program to kindergarten, second, fifth, and eighth graders and to adults; and then we interviewed them all to get at their memory for the plot and their understanding of the motives of the main characters and the consequences of their actions.

We were primarily interested in the extent to which the central social act -- in this case, aggression -- was construed in terms of its relevant context: the aggressor's motives for committing the act and the consequences

to him. /Insert SLIDE #1/ The first slide shows that kindergarteners typically recalled only the aggressive action; quite often, their entire retelling of the plot consisted of "Some people got killed" or "Well, there was lots of shooting and this boy got killed". But the older subjects associated first, consequences, then motives, and -- finally -- the full complex of motives and consequences with the aggressive action.

We found no age changes in evaluations in this study, probably because the motives and consequences of the action, and the act itself, all implied a negative evaluation. However, Tom Berndt and Emily Berndt have just done a study that both replicates our finding that comprehension of acts in terms of motives increases with age and also goes a step further by directly comparing comprehension to evaluation. In this work, preschool, second- and fifth-grade children saw short filmed sequences with child actors, in which the motives of the actor varied. Along with the increased comprehension of motives, there was also an age increase in the correctness of children's evaluations. Moreover, in most cases where children's evaluations were incorrect (by adult standards), it appears to have been because they had misunderstood the actor's motives.

In other words, the evidence shows that the understanding of relevant cues in relationship to observed social acts is often poor for young observers, but improves as they grow older. Consequently, evaluations of actors and complex actions may very likely be a function of the age of the observers.

Although these studies did not go on to measure effects on behavior, I have recently reported some evidence (Collins, 1973) of behavioral differences that appear to be related to these kinds of age differences in

comprehension and evaluation. In this work, stimuli were designed to vary the ease with which the action of an aggressive model could be related to cues about the actor's motives and the consequences to him. Third graders either saw a television program in which negative motives and consequences scenes were separated from aggression by commercials, or they saw the negative modifying cues in contiguity with the aggression. Our measure of aggression was a self-report instrument, in which children were asked to indicate how they would behave in response to a series of hypothetical situations. The measure was developed by Leifer and Roberts (1972) and their colleagues at Stanford, and it was validated against such observational measures of aggression as Bandura's familiar procedure and the teacher-rating type of measures. /See Leifer and Roberts or Collins (1973) for a more detailed description of the measure and the validation procedures./

/Insert SLIDE #2/ As you can see from the next slide, the Separation group subsequently became more aggressive than the No-Separation group at the third-grade level. These differences did not hold for the sixth and tenth graders in the study. Apparently, for the Separation third graders, the separating commercials interfered with comprehension of aggression in terms of negative motives and consequences, so that the aggression was unmodified as a model for behavior. But temporal contiguity of the three scenes seemed to make the comprehension task easier for the other group of third graders. Older subjects apparently could handle the cognitive difficulties imposed by separation, so that their comprehensions of the act under Separation were essentially the same as those formed under temporal contiguity. Presumably, these inferred cognitive differences

are similar to the kinds of age-related differences in comprehension and evaluation that were found in the studies I described earlier. Taken together, those data and this latter evidence of differences in behavioral effects suggest that the cognitive-mediator concept may be very useful in explaining variations in the effects of observing social interactions. It is especially useful when those variations are a function of observers' age-related cognitive capabilities.

In addition to the factor of changing cognitive skills, variation in effects may also often be due to age-related changes in the bases for evaluating social acts in general. For example, the Piagetian moral-judgment paradigm describes change toward evaluating acts on the basis of intentions, rather than consequences. Some of our recent work indicates that this is certainly the case in television viewing. We have already shown the trend away from primarily consequences-based judgments toward judgments involving the actors' motives as well. /Insert SLIDE #3/ The next slide shows rather dramatically the shift toward reliance on inferences about motives in evaluating a social act, with the major transition coming between second and fifth grades.

These bases for social judgments are the same factors we have already described as modifying the effects of observation on behavior. Thus, the implication is that if the motive and consequences cues are inconsistent, behavioral effects might be different for children of different ages. For example, children may observe a situation in which positive consequences follow a negatively motivated social act. Assuming that the act itself does not (as killing does) strongly imply negative evaluation, this

situation might lead to developmental differences in subsequent performance, because of the strong tendency of younger viewers to judge an act on the basis of consequences, rather than motives.

We don't yet have the developmental data pertinent to this latter prediction. But we do have indications from a modeling study with children (Collins & Van Siclen, in preparation) that behavioral effects are predictable from conditions that vary positive and negative modifying cues. These children (both second and eighth graders) watched a model perform a simple picture-preference task. The model either showed positive, altruistic motives for making the choices she did or a negative, non-beneficent attitude. She was then either praised for her efforts or she received a negative message from the experimenter. /Insert SLIDE #4/ You can see from the slide that there was a decline in imitation of the model as motive and consequences cues became increasingly negative. This effect was statistically significant in these preliminary data. Furthermore, subjects' evaluations of the model and the act were concomitant with the condition differences in behavioral effects. Evaluations were most positive in the condition where motives and consequences were both positive and most negative when cues were both negative. When cues were incongruent, mean evaluations were intermediate. Thus, this study adds a new dimension to previous evidence by showing that different cues about the model's behavior produce differences in both evaluation of the actor and action and the observer's subsequent behavior.

We did not find the developmental effect we expected, probably because of the particular motives and consequences we chose to depict and their relative salience. Work is continuing on this problem. However, what we have

in this preliminary study indicates that the cues for which we can clearly expect, on the basis of previous work, age-related differences in judgments of social acts also affect the imitation of simple behaviors. Again, a cognitive-mediator notion suggests that differences in behavior are concomitant with differences in the content of the mediator, which may in turn be due to age-related differences in the bases for evaluating social acts in general.

Harold Kelley (1973) has recently written that "(Man's) causal explanations play an important role in providing his impetus to action and in his decisions among alternative courses of action." We have summarized evidence suggesting that this is no less true of children's social evaluations. Our studies show that under conditions that should produce negative evaluations of actors, children indeed view them negatively and imitate them less than when cues lead to positive evaluations. For children as well as adults, the evaluation of a social act governs later performance of similar behaviors.

However, we have also presented a network of evidence suggesting that the conclusion needs to take account of children's age-related capabilities to evaluate social acts appropriately. Our proposal has been that the concept of a cognitive mediator be used to explain the systematic variation of evaluation -- and, thus, of behavior -- for children of different ages; and our evidence has supported the notion. Some studies have shown that children are not equally able at all ages to comprehend the full complex of cues associated with the social acts they observe. Others have shown that their comprehensions are typically closely associated with their evaluations of the acts. Other work has shown an age-related change in

the cues that are used to evaluate social acts; while still other research has indicated that, when cues are made more or less available, there are age-related differences in the behavioral effects of observing social acts. The notion of a mediator, the content of which changes as a function of the cognitive capabilities of the viewer, makes these findings coherent.

We are less interested in pushing the mediator concept than in making you aware of the evidence that it helps us explain. The cognitive mediator idea is, of course, a complex one; some its conceptual linkages are naturally still unexplored and implicit. Yet this very complexity may be one of its virtues. At the very least, it allows for a beginning attempt to relate the complexity of the child's thought about his social world to his action in it.

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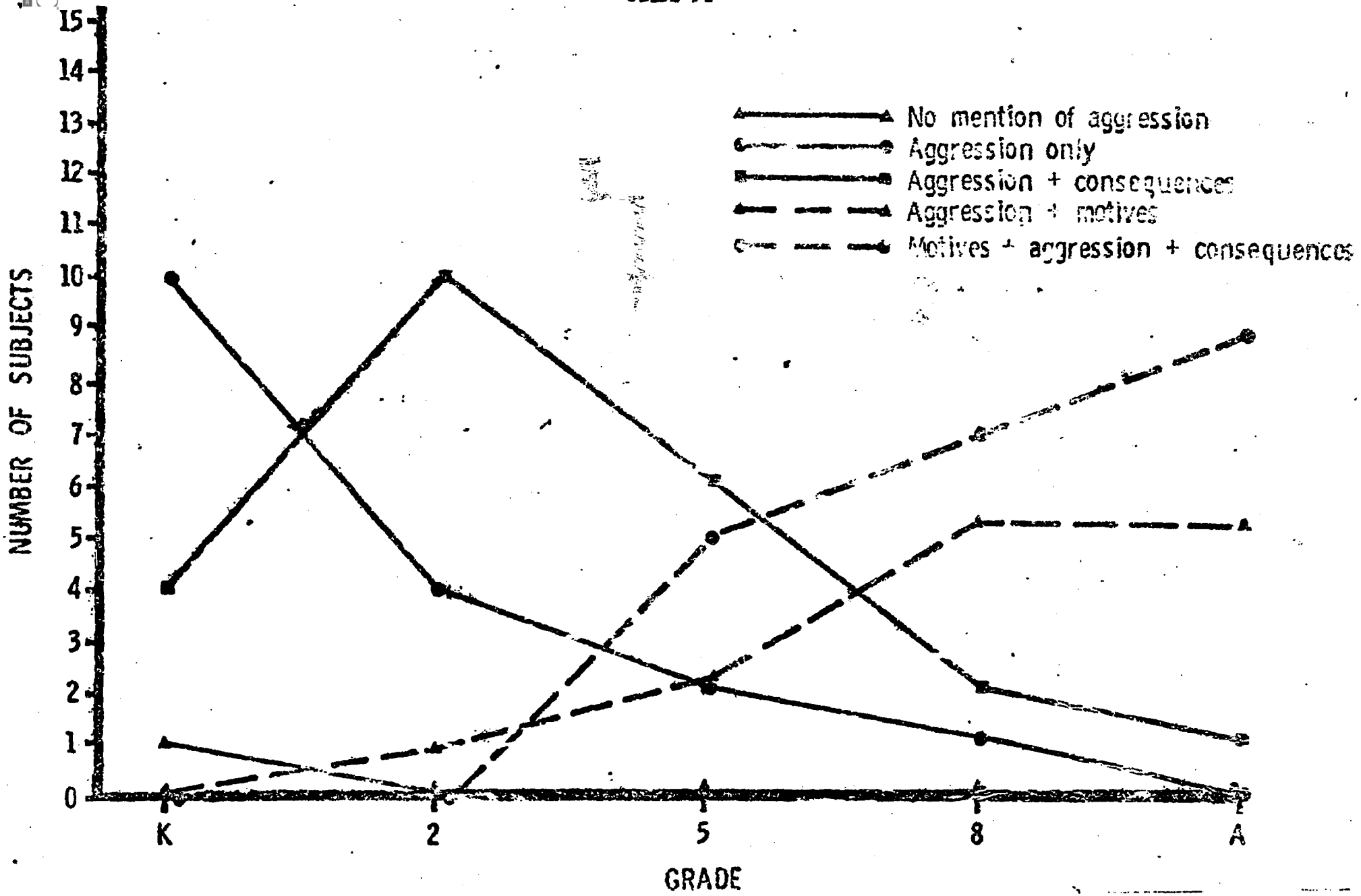
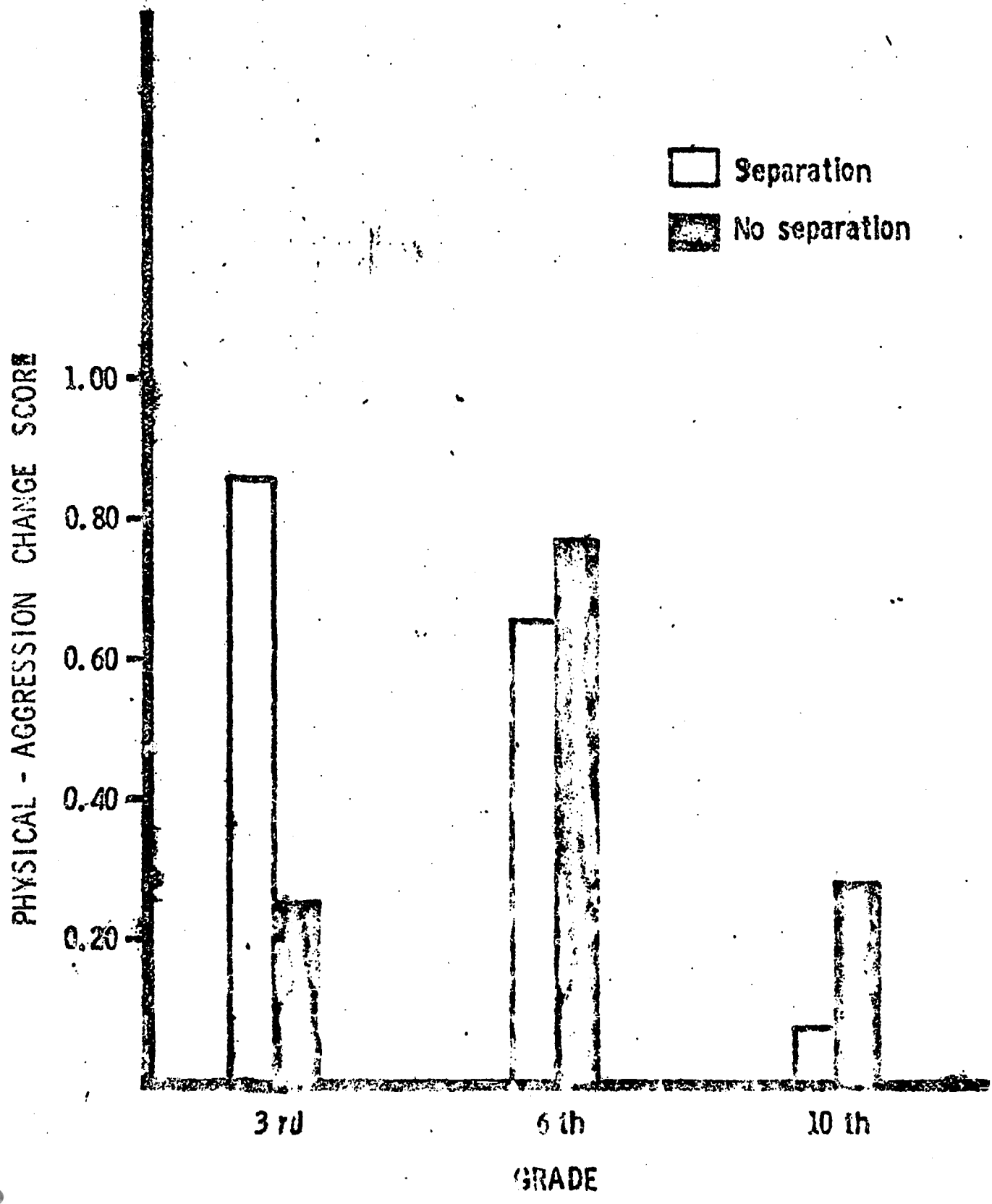
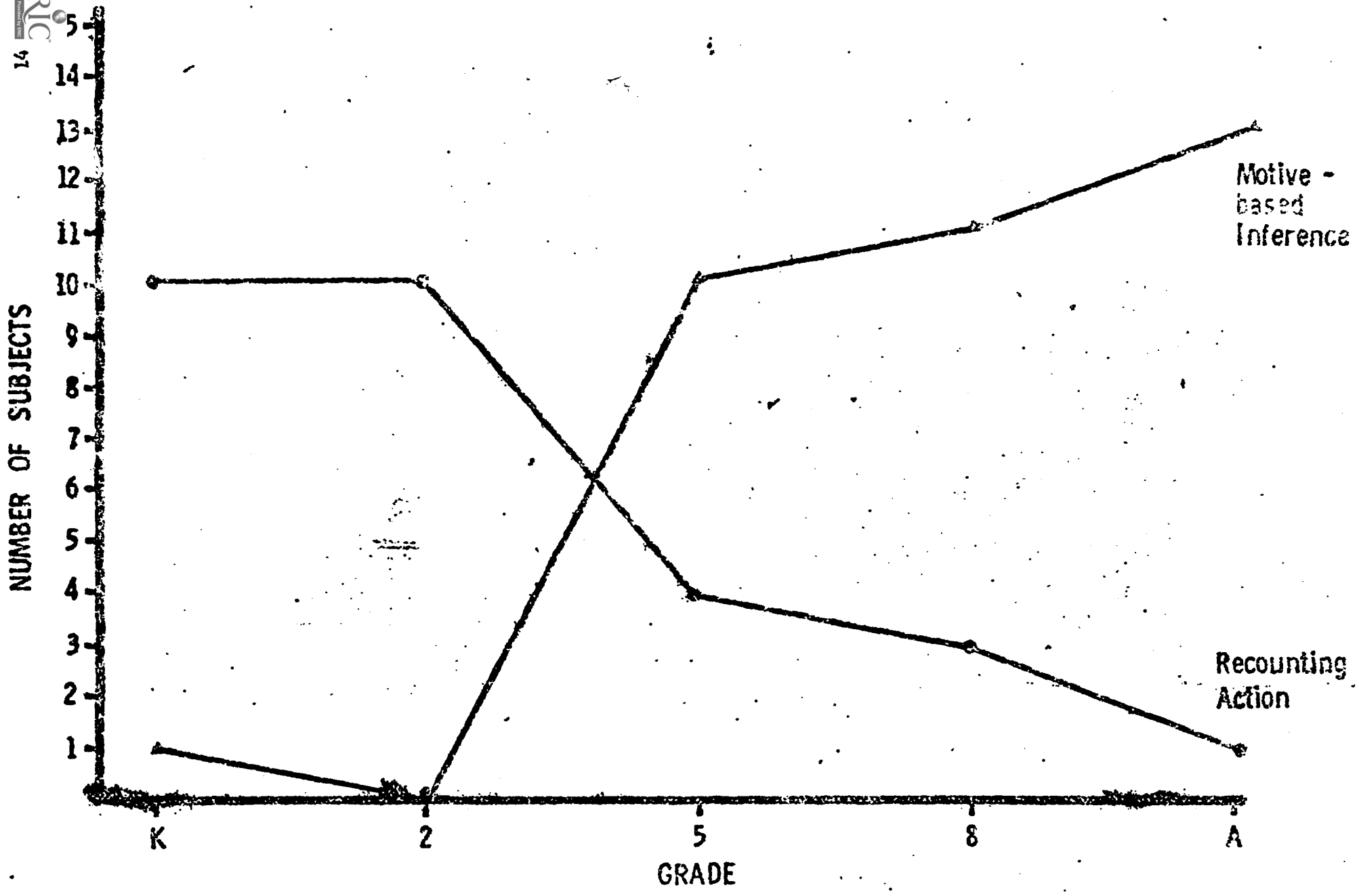
SLIDE #1


No mention of aggression
Aggression only
Aggression + consequences
Aggression + motives
Motives + aggression + consequences
NUMBER OF SUBJECTS
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
K
2
5
8
A
GRADE

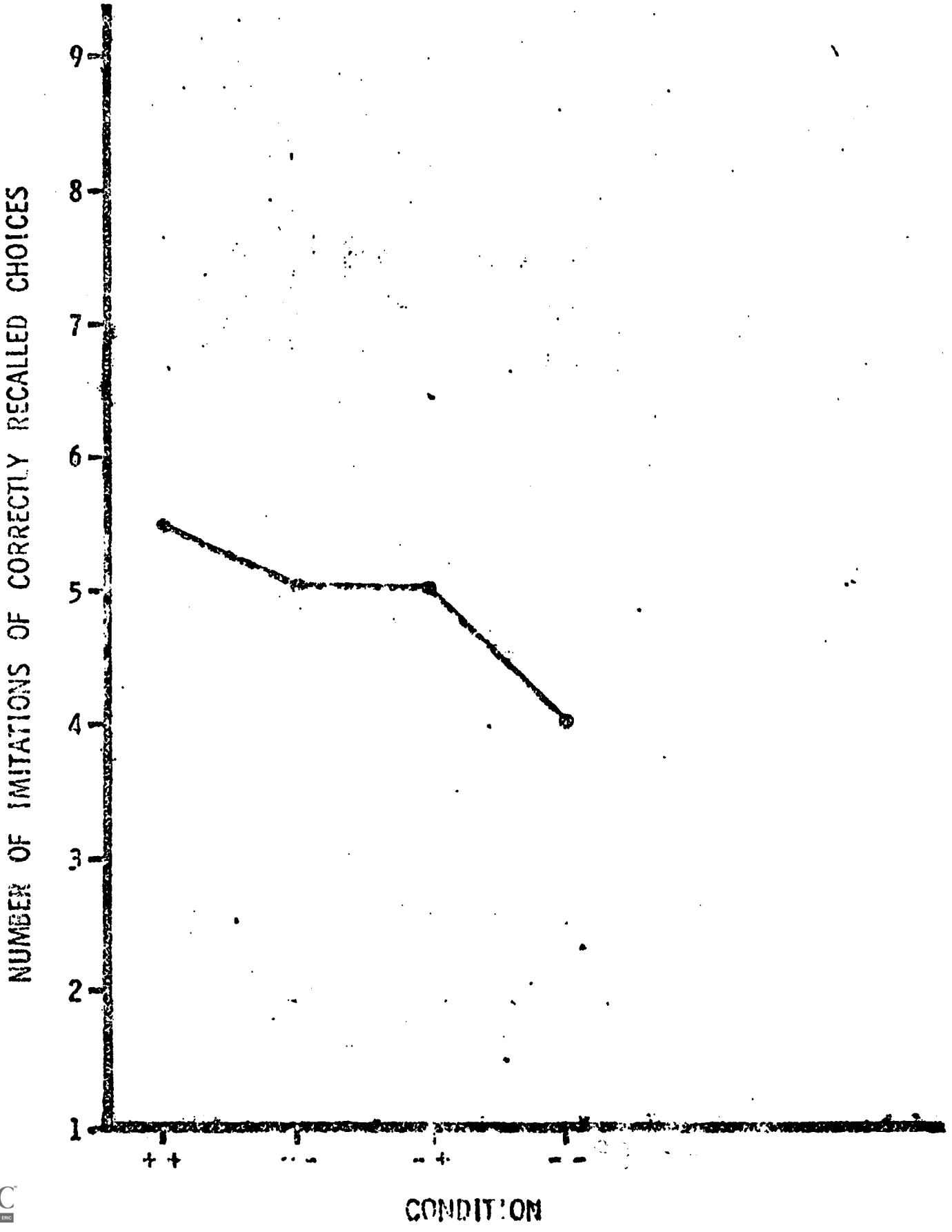
SLIDE #2


Separation
No separation
PHYSICAL - AGGRESSION CHANGE SCORE
1.00
0.80
0.60
0.40
0.20
3rd
6th
10th
GRADE

SLIDE #3


NUMBER OF SUBJECTS
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
K
2
5
8
A
GRADE
Motive - based Inference
Recounting Action

SLIDE #4


NUMBER OF IMITATIONS OF CORRECTLY RECALLED CHOICES
9
8
7
6
5
4
3
2
1
+ +
- -
- +
+ -
CONDITION